BEFORE THE COPYRIGHT ROYALTY JUDGES WASHINGTON, D.C.

In the Matter of:

Docket No.:

Distribution of the 2010-2013 Cable Royalty Funds 14-CRB-0010-CD (2010-2013)

AMENDMENT TO WRITTEN REBUTTAL CASE OF THE CANADIAN CLAIMANTS GROUP

Canadian Claimants Group

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AMENDMENT TO REBUTTAL CASE OF THE CANADIAN CLAIMANTS GROUP

Canadian Claimants Group

BEFORE THE COPYRIGHT ROYALTY JUDGES LIBRARY OF CONGRESS WASHINGTON, DC

In re

Docket No. 14-CRB-0010-CD (2010-2013)

Distribution of 2010-2013 Cable Royalty Funds Consolidated with: Docket No. 14-CRB-0011-SD (2010-2013)

AMENDMENT TO REBUTTAL CASE

OF THE

CANADIAN CLAIMANTS GROUP

The Canadian Claimants Group ("CCG") hereby submits this Amendment to its Rebuttal Case in the Allocation Phase of the above referenced proceeding. This Amendment is filed pursuant to the Copyright Royalty Judges (Judges) Order of January 22, 2018, allowing parties to file amended written rebuttal testimony related to certain limited new materials submitted in this case.

The Amendment consists of one piece of new testimony, attached as Exhibit 4028: the Amendment to Written Rebuttal Testimony of Matthew Shum, Ph.D., dated February 9, 2018. In this Amendment to his prior rebuttal testimony, Dr. Shum addresses the Third Errata to Amended and Corrected Written Direct Statement and Second Errata to Written Rebuttal Statement Regarding Allocation Methodologies of Program Suppliers dated January 22, 2018. In particular, he

focuses on the Testimony of Jeffrey S. Gray, Ph.D., originally dated December 22, 2016, amended March 9, 2017, corrected April 3, 2017, and corrected January 22, 2018, as well as the underlying data provided with that testimony. This document should be read in conjunction with Dr. Shum's prior written rebuttal testimony rather than as a replacement.

Respectfully Submitted,

/s/ L. Kendall Satterfield

Dated: February 12, 2018

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CERTIFICATE OF SERVICE

I, Victor J. Cosentino, hereby certify that on this 9th Day of February, I caused copies of the foregoing Amendment to Written Rebuttal Case of the Canadian Claimants Group in the *Distribution of 2010-2013 Cable Royalty Funds*, Docket No. 14-CRB-0010-CD (2010-2013), to be served by Overnight Delivery (to those marked with an *) and by Electronic Transmission on the following parties:

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EXHIBIT 4028

AMENDMENT TO WRITTEN REBUTTAL TESTIMONY OF MATTHEW SHUM, Ph.D. FEBRUARY 9, 2018

Canadian Claimants Group

Amendment to Written Rebuttal Testimony of Matthew Shum, Ph.D.

2010-2013 Cable Royalty Distribution Proceeding

Docket No. 14-CRB-0010-CD (2010-2013)

February 9, 2018

1. I, Matthew Shum, am the J. Stanley Johnson Professor of Economics in the Division of Humanities and Social Sciences at the California Institute of Technology ("Caltech") in Pasadena, California. I previously submitted Written Rebuttal Testimony in this matter dated September 15, 2017. I now write to provide an amendment to that testimony in light of new testimony received from Program Suppliers. This document should be read in conjunction with my prior written rebuttal testimony rather than as a replacement.

A. INTRODUCTION

2. I have examined the Third Errata to Amended and Corrected Written Direct Statement and Second Errata to Written Rebuttal Statement Regarding Allocation Methodologies of Program Suppliers dated January 22, 2018. In particular, I focus on the Testimony of Jeffrey S. Gray, Ph.D., originally dated December 22, 2016, amended March 9, 2017, corrected April 3, 2017, and corrected January 22, 2018 ("Dr. Gray's January 22, 2018 Testimony") as well as the underlying data provided with that testimony.

- 3. I have not had sufficient time to prepare a full response to Dr. Gray's January 22, 2018 Testimony, but there are several comments that I would like to make which amend and supplement my rebuttal statement, dated September 15, 2017.
- 4. Initially, it is important to note that there is nothing in Dr. Gray's January 22, 2018 Testimony that changes the conclusion I presented in my original rebuttal testimony that a viewing-based approach to relative marketplace value is conceptually problematic because it ignores important economic features of the distant signal marketplace which drive market value for distant signal programming. As a result, I continue to believe viewing should not be a primary or sole criterion for determining the relative market value of distant signal programming.
- 5. Looking specifically at Dr. Gray's January 22, 2018 Testimony, it contains several major and substantive changes to the prior versions of his viewing study. They are: (i) the inclusion of previously omitted Nielsen viewing data for WGN, the (by far) largest station in the distant signal marketplace; (ii) the use of weighted-household¹ measures of viewing in place of the count of households viewing which were used in Dr. Gray's previous statements; and (iii) running separate regressions for WGN and non-WGN data in his econometric exercise and then combining the results.
- 6. There is little comment by Dr. Gray regarding these three changes. Change (i) received no new comment in Dr. Gray's January 22, 2018 Testimony. Changes (ii) and (iii) are mentioned only in footnote 30 to the testimony. In that footnote, Dr. Gray mentions briefly that separate regressions were run for the WGN and non-

In what follows, I will use the term "weighted" to denote the use of weighted-household measures of viewing, as in Dr. Gray's latest viewing study (dated January 22, 2018), and the term "non-weighted" to denote the nonweighted count of household viewing, as in Dr. Gray's previous viewing study (dated April 3, 2017).

WGN data due to "the large differences between WGN and non-WGN stations in terms of the extent of non-compensable programming, the number of distant subscribers, and the level of distant viewing." The footnote also mentions that the regressions used "Nielsen weighted household viewing minutes of retransmitted programming" without indicating either that this differed from his earlier regression model or why this change was made.

- 7. These three changes were substantial, and not surprisingly they led to large changes in Dr. Gray's royalty shares, including cuts in the Program Suppliers' share and a more-than-doubling of JSC shares across the four years.
- 8. I did not see any compelling arguments in Dr. Gray's January 22, 2018
 Testimony explaining these substantive changes. It is unusual that such substantial changes were undertaken simultaneously in the regression methodology with such paucity of comment. While presumably, change (i) listed above (inclusion of previously omitted Nielsen viewing data for WGNA) is necessary if Dr. Gray had previously used incomplete data, some explanation about the omission and the effect of the additional data was warranted. More problematically, I also did not see any robustness checks showing what the royalty shares would be if changes (ii) and (iii) were not undertaken. From my experience as a researcher and as a professor teaching and advising students in economic research, any researcher presenting work in which the results and methodologies changed as much as did Dr. Gray's (between his prior and new studies), should provide robustness checks to determine the extent to which the new results depended on the methodological changes.

B. ROBUSTNESS CHECKS ON DR. GRAY'S NEW REGRESSION

- 9. Therefore, in my review, I focused on computing these robustness checks for Dr. Gray's latest viewing study. In all these checks, I included the new WGN data used in Dr. Gray's regressions. To focus on change (ii) listed above (the use of weighted-household measures), I duplicated Dr. Gray's new regressions using the non-weighted measure of household viewing that Dr. Gray's used in his original testimony. To focus on change (iii) listed above (running separate regressions for WGN and non-WGN), I duplicated Dr. Gray's new regressions combining both WGN and non-WGN data in one single regression.
- 10. In total, then, I ran three new models of the viewing study. These three models and their relation to Dr. Gray's new viewing study model are described in Table 1. For convenience, I label Dr. Gray's new viewing study model "A", and my three new models as "B," "C," and "D."

Table 1: Robustness Checks on Gray's New Viewing Study

	Separate WGN/non-WGN	Combined WGN/non-WGN
Weighted viewing data	Dr. Gray's new viewing study ("A")	My model "B"
Non-weighted viewing data	My model "C"	My model "D"

11. The royalty shares resulting from Dr. Gray's new viewing model, in addition to my three new models, are presented in Table 2.

Table 2: Royalty Shares From New Regressions

Year	Claimant	Model A	Model B	Model C	Model D
2010	CCG	1.66	2.46	2.07	2.73
	CTV	21.27	21.52	21.28	21.30
	SDC	1.41	2.25	1.31	2.15
	PS	44.66	40.91	42.99	40.24
	Pub	24.12	25.23	24.15	24.73
	JSC	6.88	7.63	8.21	8.86
2011	CCG	3.38	4.79	3.69	5.25
	CTV	19.68	21.29	20.11	21.61
	SDC	1.72	1.77	1.82	1.76
	PS	41.80	36.02	39.09	33.45
	Pub	24.26	26.51	25.75	27.57
	JSC	9.16	9.61	9.53	10.36
2012	CCG	3.21	5.56	3.67	6.23
	CTV	23.50	25.09	21.6	23.27
	SDC	0.91	0.78	0.88	0.77
	PS	33.54	30.54	31.61	28.89
	Pub	33.54	32.36	36.84	34.83
	JSC	5.30	5.67	5.41	6.01
2013	CCG	3.80	6.64	5.23	7.41
	CTV	18.17	20.38	19.03	20.49
	SDC	0.88	0.72	0.86	0.79
	PS	43.52	37.09	36.73	33.00
	Pub	26.48	27.92	30.02	30.54
	JSC	7.15	7.25	8.13	7.77

- 12. Several results are of note. First, the royalty shares for Program Suppliers are largest in Model A, corresponding to the results presented in Dr. Gray's January 22, 2018 Testimony. At the same time, the royalty shares for CCG and JSC are the lowest in Model A.
- 13. Given the appreciable differences in the royalty shares across the four models in Table 2, the fact that Dr. Gray provides no justification for his preference for Model A is puzzling. Since I see no reason for preferring any one of these models over the others, a natural step for obtaining royalty shares from all four models would be to average across the models. I have done this, and end up with the royalty shares in Table 3.

Table 3: Royalty Shares from Averaging Models A through D in Table 2

Claimant	2010	2011	2012	2013
CCG	2.23	4.28	4.67	5.77
CTV	21.34	20.67	23.37	19.52
SDC	1.78	1.77	0.84	0.82
PS	42.20	37.59	31.15	37.59
Pub	24.56	26.02	34.39	28.7
JSC	7.90	9.67	5.60	7.58

C. INCORPORATING MY PREVIOUS ADJUSTMENTS

- 14. In my original rebuttal testimony, I performed two adjustments to Dr. Gray's previous viewing model. I now consider each adjustment in turn.
- 15. My first adjustment was to add a dummy variable for CCG programming to Dr. Gray's regression, which would control for systematic differences in the distant and

local viewing of CCG programs (carried on Canadian signals) versus non-CCG programs, carried on US signals.

- 16. As remarked above, a major change in Dr. Gray's viewing study model was his inclusion of new Nielsen viewing data for WGN. In his previous study, data on WGN was used in the regression analysis, but very few observations of nonzero distant viewing were observed in the data. Specifically, in each year, over 99% of the observations for WGN had zero distant viewing.
- 17. In contrast, the new WGN data, used in Dr. Gray's latest viewing study, looks strikingly different. Table 4 shows that in the new WGN data much more distant viewing is observed. We see that across all four years, the distant viewing of WGN programs (far) outstrips local viewing. Similarly, for CCG programs, distant viewing exceeds local viewing from 2010-2012 and is roughly on par in 2013. These patterns for WGN and CCG programs contrast with all other programs, for which local viewing typically far outstrips distant viewing. Indeed, I argued in my previous testimony that CCG programming was distinctive from non-CCG programming in that CCG distant viewing typically exceeds (or is at least the same order of magnitude as) local viewing, and this motivated my first adjustment. After examining the new WGN data, however, I see that this is no longer true, as distant viewing also typically exceeds local viewing for WGN programs and, moreover, to an even greater margin than for CCG programs.

Table 4: Distant and Local Viewing for CCG, WGN, and All Other Programs

		2010	2011	2012	2013
CCG	Local	74	70	476	792
	Distant	1,441	1,100	548	471
	Ratio	19.51	15.66	1.15	0.59
WGN	Local	2,158	2,033	1,834	765
	Distant	235,578	260,758	243,015	192,875
	Ratio	109.17	128.27	132.51	252.17
All Others	Local	14,168	12,070	12,584	10,794
	Distant	714	618	645	473
	Ratio	0.05	0.05	0.05	0.04

- 18. Since my first adjustment was motivated primarily by my understanding (based on Dr. Gray's old data) that the pattern of local to distant viewing is systematically different between CCG and non-CCG programs, it may no longer be necessary given the new WGN data used by Dr. Gray in his viewing study model. Indeed, after examining Dr. Gray's new WGN data I would no longer advocate for the first adjustment as I did in my previous testimony.
- 19. Given that the adjustment was based on a material difference in the ratios of distant to local programming between CCG and US programming and that such a difference no longer exists in the data, this adjustment can no longer be justified. Nevertheless, it would be remiss for me not to report the effect of this adjustment on "Model A," which is Dr. Gray's new viewing study. I have performed my first adjustment on Model A and the results show that the first adjustment no longer has the same effect. In fact, with Dr. Gray's new data, we see that the first adjustment has the effect of lowering CCG share in all four years (1.0, 1.4, 1.8, and 1.7 in 2010 through 2013, respectively). To be clear, I do not believe that this lowered result is a valid estimate of the relative marketplace value of CCG programming because, as

noted above, the nature of the new WGN data no longer supports the motivating rationale underlying my adjustment.

20. Next, I consider my second adjustment, which was to account for two Canadian stations (CKSH, CKWS) which were among Dr. Gray's sample stations in 2010 but not included in his results. The royalty shares for 2010 after performing my second adjustment on all four models above are presented in Table 5.

Table 5: 2010 Royalty Shares from Applying Second Adjustment to

New Gray Viewing Study

Claimant	Model A	Model B	Model C	Model D
CCG	2.58	3.73	3.16	4.03
CTV	21.00	21.19	20.99	20.97
SDC	1.40	2.22	1.30	2.12
PS	44.24	40.37	42.48	39.71
Pub	23.81	24.85	23.81	24.35
JSC	6.97	7.63	8.25	8.82

21. As with Table 3 above, if we average these shares across all four models we get the shares for 2010 shown in Table 6.

Table 6: 2010 Royalty Shares after Second Adjustment,

Averaged across Models A-D

Claimant	Average share
CCG	3.38
CTV	21.04
SDC	1.76
PS	41.70
Pub	24.21
JSC	7.92

22. By combining the results from Table 3 above for 2011 through 2013, with the adjusted results from Table 6 above for 2010, we get the four-year results shown below in Table 7, for 2010 through 2013.

Table 7: Royalty Shares from Averaging Models A through D
with Adjustment for 2010

Claimant	2010	2011	2012	2013
CCG	3.38	4.28	4.67	5.77
CTV	21.04	20.67	23.37	19.52
SDC	1.76	1.77	0.84	0.82
PS	41.70	37.59	31.15	37.59
Pub	24.21	26.02	34.39	28.7
JSC	7.92	9.67	5.60	7.58

D. CONCLUSION

- 23. As noted at the outset of this amendment, I continue to believe that viewing should not be relied upon as a primary or sole criterion for determining the relative market value of distant signal programming. Dr. Gray's January 22, 2018 Testimony provided no new information which would justify a change to that conclusion.
- 24. Further, Dr. Gray's new viewing study made unexplained and unjustified decisions regarding combining and weighting data. Though there were four possible combinations for handling changes (ii) and (iii), he presented only one. Given that there is no objective and clear economic basis for selecting among those four, it is more natural to take their average as a reasonable means of reconciling the results, than to arbitrarily select one.
- 25. Finally, if the Judges use viewing-based data in their determination of royalty allocations in this proceeding, my second adjustment is necessary to accommodate a bias in Dr. Gray's analysis which understates the distant viewing of CCG programming in 2010.
- 26. In conclusion, my adjusted viewing-based shares for CCG programming based on Dr. Gray's January 22, 2018 Testimony are 3.38%, 4.28%, 4.67%, and 5.77% for the years 2010-2013, respectively. To the extent that viewing is an indicator of relative marketplace value, I consider these adjusted viewing-based shares a floor on the CCG royalty shares for those years, as my calculations do not take into account the statutory restrictions on retransmissions of Canadian distant signals over two-thirds of the "lower 48" United States, which I discussed in my original rebuttal testimony.

Declaration of Matthew Shum

I, Matthew Shum, declare under p	penalty of perjury that the foregoing is true and correct.
Executed inPasadena CA	, onFebruary 9, 2017.
Ma	tthew Shum

Certificate of Service

I hereby certify that on Monday, February 12, 2018 I provided a true and correct copy of the Written Rebuttal Statement - Amended on Written Rebuttal Statement of the Canadian Claimants Group to the following:

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